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## ENCOURAGING ENERGY EFFICIENCY THROUGH NEPA COMMENTS

*By Adam Riedel, CCCL Associate Director and Fellow*

The National Environmental Policy Act (“NEPA”) requires the preparation of a detailed environmental report, called an Environmental Impact Statement (“EIS”), for all “major Federal actions significantly affecting the quality of the human environment.”<sup>1</sup> EISs are required to consider and evaluate the environmental impacts of the proposed action, alternatives to the proposed project or action and measures to mitigate the impacts of the proposed project or action. Rules, regulations, agency guidance and case law have all contributed to clarifying exactly what matters an EIS should discuss to comply with the mandates of the NEPA statute. However, changing technology and the emergence of new environmental concerns since the adoption of NEPA, such as climate change, keep the issues that must be addressed in an EIS in a somewhat fluid state.

One topic that often receives insufficient attention in EISs is energy efficiency and conservation. Energy conservation is the reduction of the unnecessary use of energy. Energy efficiency involves increasing the ratio of energy output to energy input. In other words, energy efficiency involves obtaining a level of production output with a decreasing energy input. While these two concepts are distinct, the terms are often used interchangeably and many older statutes, regulations and cases use the term “energy conservation” to refer to both concepts. Energy efficiency has tremendous potential to mitigate the environmental impacts associated with energy usage stemming from a proposed project or action. Additionally, in some instances, energy efficiency may be a viable alternative to a proposed project or action in its entirety. The scant attention often paid to energy efficiency in EISs combined with its significant mitigation potential and role as a possible alternative to certain projects makes it a fruitful commenting opportunity in the NEPA process and a potential avenue for challenging inadequate EISs through litigation.

This paper serves as a guide to commenting on and challenging EISs on the basis of insufficient consideration of the issue of energy efficiency and conservation. It begins by discussing the statutory and regulatory basis underlying the consideration of energy efficiency and conservation in EISs and then tracks the EIS regulatory pathway, pointing out where and how energy efficiency comments can be injected into the NEPA process. The paper concludes with a discussion of the procedural course for bringing NEPA litigation.

### **I. Regulatory Basis for Commenting on Energy Efficiency in an EIS**

It is appropriate and arguably mandated for energy efficiency and conservation to be considered in an EIS in many instances. The NEPA regulations of the Council on Environmental Quality (CEQ), which are binding on all federal agencies, spell out in some detail the considerations that must be addressed in an EIS. Of significant importance in the energy efficiency and conservation context is the regulatory

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<sup>1</sup> National Environmental Policy Act of 1969, §102, 42 U.S.C. §4332 (2010).

mandate that “[e]nergy requirements and conservation potential of various alternatives and mitigation measures” be discussed in an EIS.<sup>2</sup> Because the issues discussed and considered in any EIS are highly dependent on the specific project or action in question, not every issue mentioned in the NEPA regulations will be appropriate for discussion or lengthy consideration in the NEPA process or the resulting EIS. However, the NEPA regulations provide a strong basis for the argument that the consideration of energy efficiency and conservation in an EIS is mandated for a wide variety of projects.

The most explicit direction that energy efficiency and conservation be considered in an EIS is in relation to mitigation measures and alternatives that should be considered in the EIS.

### *Mitigation*

In discussing a proposed project and considered alternatives, an EIS must discuss the environmental impacts of a proposed action and any considered alternatives and “[m]eans to mitigate adverse environmental impacts.”<sup>3</sup> “Mitigation” is defined in the NEPA regulations as including, in relevant part, “[a]voiding the impact altogether by not taking the action” and “[m]inimizing impacts by limiting the degree or magnitude of the action and its implementation.”<sup>4</sup> Further informing what the discussion of mitigation measures must address, the regulations require a discussion of “[e]nergy requirements and conservation potential of various alternatives and mitigation measures,”<sup>5</sup> leaving no doubt that energy usage is to be considered in the evaluation of mitigation measures. For projects with very little direct or indirect energy usage, the mitigation potential of energy conservation measures may be quite limited and therefore may not warrant significant consideration in the EIS. However, for many larger projects a failure to fully consider energy efficiency is likely in violation of the regulatory requirement above.

### *Alternatives*

NEPA Regulations require that an EIS “rigorously explore and objectively evaluate all reasonable alternatives” to the proposed project or action. This discussion of alternatives must include 1) no-action alternative; 2) other reasonable courses of action; and 3) mitigation measures (not in the proposed action).<sup>6</sup> The discussion of energy efficiency as it relates to mitigation measures is discussed above; however, energy efficiency considerations have an equally important role to play in the discussion of alternatives in an EIS.

In the discussion of alternatives, energy efficiency can provide a means of achieving some or all of the goals of the proposed project or action in some instances, which may result in a more environmentally favorable alternative emerging as a viable alternative. For example, in an EIS regarding proposed construction of an electricity transmission line to meet projected increased peak load demand in a region, a consequence discussed in the alternatives section might be unreliable electricity service in

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<sup>2</sup> 40 C.F.R. § 1502.16(e).

<sup>3</sup> 40 C.F.R. § 1502.16(h).

<sup>4</sup> 40 C.F.R. § 1508.20.

<sup>5</sup> 40 C.F.R. § 1502.16(e).

<sup>6</sup> 40 C.F.R. § 1502.14.

the areas to be served by the proposed lines in the absence of the project. However, if one of the proposed alternatives is the refurbishment of an existing transmission line to meet the increased peak load energy demands, energy efficiency may be a means by which energy usage could be significantly curtailed in the region, including at times of peak demand, thereby obviating the need for new and additional transmission capacity and making the refurbishment of existing infrastructure a more viable option. A failure to discuss the role of energy efficiency in such a scenario would, arguably, violate the dictate of the NEPA regulations that the alternatives discussion “rigorously” explore the no-action alternative.

Similarly, in the discussion of other “reasonable alternatives” energy efficiency may often have a significant impact on the scope and range of alternatives considered. Energy efficiency may combine with other factors to make courses of action other than the proposed project “reasonable.” For example, a 400MW solar facility may not be a “reasonable” alternative to a 500MW proposed fossil fuel power facility. However, when paired with energy efficiency measures which could lower the energy demands requiring the 500MW of new generation capacity, the solar facility may become a “reasonable” alternative to the fossil fuel power facility.

#### **Agency Materials That Discuss the Incorporation of Energy Efficiency and/or Conservation Into EISs**

The NEPA regulations outlined above will form the basis of arguments for the discussion of energy efficiency and conservation in EISs, however agency-specific policies and guidance prepared by the lead agency on any given EIS can be used to buttress these arguments. Many federal agencies have policies directing their respective agencies to incorporate energy efficiency and conservation considerations in EISs prepared by the agency. Although many of these policies and directives are not legally binding, they can serve as persuasive materials in comments during the NEPA process or in litigation involving EISs. Below are examples of such materials from agencies that prepare a significant number of EISs.

##### *EPA*

The EPA has issued an extensive reference guide on energy efficiency considerations for EPA staff who review documents under NEPA.<sup>7</sup> The goal of this document is to provide information to assist EPA reviewers to prepare scoping comments on EISs and to consider energy efficiency issues most appropriate to a specific type of federal action presented in an EIS. This guide provides a detailed background on federal energy efficiency legislation, policies, guidance. While this guidance is aimed at EPA reviewers of EISs, much of it can be instructive for non-governmental participants in the NEPA process. Section 5 of this document provides a list of topic areas which may be appropriate for comment in an EIS concerning federal government actions. This section also lists considerations for reviewers of EISs. Although some of the considerations discussed specifically apply to direct action taken by government agencies, such as energy efficient appliance procurement policies for federal

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<sup>7</sup> EPA, *Energy Efficiency Reference for Environmental Reviewers*, March 2010, available at <http://www.epa.gov/compliance/resources/policies/nepa/energy-efficiency-reference-for-environmental-reviewers-pg.pdf>.

agencies, many of these considerations can easily be extrapolated to other types of projects and actions as well.

#### *Department of Interior Energy Management and Conservation Program*

The Office of Acquisition and Property Management (PAM) within the Department of the Interior is responsible for coordinating a variety of sustainability and energy efficiency projects for DOI offices and bureaus. PAM oversees the Departmental Energy Conservation Committee (DECC) which is responsible, in part, for developing guidance for energy management programs and initiatives and monitoring energy management efforts. Information related to the various energy efficiency and management policies can be found at <http://www.doi.gov/pam/energy.html>. These policies and programs can be useful in informing comments on EISs to the extent that an EIS does not consider or appropriately address the energy efficiency targets, goals and programs as stated by PAM.

#### *CEQ*

The CEQ has issued draft guidance on the consideration of climate change in federal EISs. While this guidance has not been finalized and will not be binding if and when it is finalized, it is a highly influential document that is instructive as to how energy efficiency should be dealt with in EISs with regards to climate change. In this guidance, energy efficiency is specifically mentioned as a potential mitigation action for greenhouse gas emissions to be evaluated in EISs. In relevant part the guidance states, “[t]o the extent that a federal agency evaluates proposed mitigation of GHG emissions, the quality of that mitigation . . . should be carefully evaluated. Among the alternatives that may be considered for their ability to reduce or mitigate GHG emissions are enhanced energy efficiency, lower GHG-emitting technology, renewable energy, planning for carbon capture and sequestration, and capturing or beneficially using fugitive methane emissions.”<sup>8</sup>

#### *Executive Orders*

Several Executive Orders and executive level policies require or promote the consideration of energy efficiency in federal actions, including the following:

- Executive Order 13423 – Strengthening Federal Environmental, Energy and Transportation Management
  - This order, issued in 2007, among other things requires each federal agency to improve energy efficiency and reduce the greenhouse gas emissions of the agency through reduction of energy intensity by (i) 3 percent annually through the end of fiscal year 2015, or (ii) 30 percent by the end of fiscal year 2015.
- Executive Order 13211 – Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

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<sup>8</sup> Council on Environmental Quality, *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, February 18, 2010, available at [http://ceq.hss.doe.gov/nepa/regs/Consideration\\_of\\_Effects\\_of\\_GHG\\_Draft\\_NEPA\\_Guidance\\_FINAL\\_02182010.pdf](http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_of_GHG_Draft_NEPA_Guidance_FINAL_02182010.pdf)

- This order, issued in 2001, requires agencies to prepare a detailed “Statement of Energy Effects” for any actions that are expected to have a significant adverse effect on the supply, distribution or use of energy. The Statement of Energy Effects must discuss the adverse effects on energy supply, distribution and use from the proposal and reasonable alternatives to the proposal along with the expected effects of such alternatives on energy supply, distribution and use.
- Executive Order 13514 – Federal Leadership in Environmental, Energy, and Economic Performance
  - This order, issued in 2009, requires the identification and analysis of “impacts from energy usage and alternative energy sources in all Environmental Impact Statements and Environmental Assessments for proposal for new or expanded Federal facilities” under NEPA.

### **Case Law on Energy Efficiency Considerations in EISs**

There has been very little litigation at either the federal or state levels dealing with the consideration of energy efficiency and conservation in EISs. The principal case on this issue is *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*<sup>9</sup> In that case, the decision of the Atomic Energy Commission to grant an operating license to a nuclear power facility was challenged on the grounds that the EIS in connection with the permit failed to consider energy conservation. The Supreme Court held that the Atomic Energy Commission’s decision not to reopen the EIS for the purposes of considering energy conservation was not “arbitrary and capricious.” The Court’s rationale was that “the concept of ‘alternatives’ is an evolving one, requiring the agency to explore more or fewer alternatives as they become better known and understood.”<sup>10</sup> At the time of the preparation of the draft EIS in 1971, the Court noted, energy conservation was not a concept that was given much thought by the government or the American public. The Court further noted that it was not until the oil crisis of 1973 that energy conservation began to be seriously considered as an “alternative” in energy policy discussions, and it was not until 1973 – 74 that federal agencies began to require the consideration of energy conservation in EISs and other administrative processes. Accordingly, the Court held that based on the record before the Atomic Energy Commission at the time it considered the EIS, it was reasonable for the Commission to decline to consider energy conservation in the EIS.

While *Vermont Yankee* is still the leading case on the consideration of energy efficiency and conservation in EISs, it is unclear what, if any, force this decision would have on a similar challenge brought today. Given that energy efficiency and conservation are far more developed concepts and incorporated into a wide variety of federal plans, policies and procedures as noted above, there seems to be a strong distinction to be drawn between the facts underlying the decision in *Vermont Yankee* and the current situation.

Despite extensive research, CCCL only discovered two other cases at either the federal or state levels that meaningfully addressed energy efficiency or conservation. The first, *Natural Resources*

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<sup>9</sup> 435 U.S. 519 (1978).

<sup>10</sup> *Id.* at 552 – 53.

*Defense Council, Inc. v. Hodel*,<sup>11</sup> was a challenge to the Department of the Interior’s FEIS for its proposed five-year outer continental shelf leasing program. In part the, plaintiffs claimed that the EIS failed to adequately consider conservation measures, specifically increased automobile mileage standards, as a partial alternative to the proposed drilling plan. The court held that partial alternatives must be considered in an EIS even if such alternatives do not reduce the need for the overall project. However, in this instance the court found that a general discussion of energy conservation policies and measures in an appendix was sufficient to satisfy the requirements of NEPA.

The second, *All Indian Pueblo Council v. United States*,<sup>12</sup> involved the proposed construction of an electric transmission line in New Mexico. Environmental organizations and an Indian tribe challenged the sufficiency of the consideration of alternatives, including demand side planning and energy efficiency, in the EIS. The EIS noted current energy conservation measures already in place in the region to be served by the proposed transmission line, but rejected demand side planning from further consideration as an alternative, deeming additional energy conservation to be “unrealistic’ absent an unlikely shift in national priorities and additional conservation mandates or incentives.” The court held that the brief consideration of demand side planning was adequate under NEPA because the EIS explained why this option was rejected.

### **State “Little-NEPA” Statutes**

The bulk of this paper focuses on EISs prepared pursuant to federal NEPA. However, sixteen states, the District of Columbia and Puerto Rico have environmental policy acts similar to NEPA.<sup>13</sup> These acts, sometimes called “mini-NEPA” statutes, often have similar requirements to those of NEPA and some go beyond the federal requirements. Below, the energy efficiency and conservation related requirements of New York’s State Environmental Quality Review Act (“SEQRA”) and the California Environmental Quality Act (“CEQA”) are explained. For actions and projects in other states, it is recommended that those considering submitting comments on or challenging EISs based on energy efficiency consider the requirements of that state’s mini-NEPA statute if one exists.

#### **SEQRA**

SEQRA requires state and local agencies to prepare an EIS for any agency action that may have a significant impact on the environment. Like NEPA, agency “actions” include not only physical projects undertaken by an agency, but also projects the involve agency funding, projects that require agency approvals or permits and the adoption of agency policies, rules, regulations and procedures.<sup>14</sup>

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<sup>11</sup> 865 F.2d 288 (D.C. Cir. 1988).

<sup>12</sup> 975 F.2d 1437 (10th Cir. 1992).

<sup>13</sup> The states having such statutes are: Arkansas, California, Connecticut, Florida, Hawaii, Indiana, Maryland, Massachusetts, Minnesota, Montana, New York, North Carolina, South Dakota, Virginia, Washington and Wisconsin.

<sup>14</sup> For a detailed discussion of SEQRA and the New York State environmental review process see Michael Gerrard, Daniel Ruzow and Philip Weinberg, *Environmental Impact Review in New York* (LexisNexis).

If an EIS is required for an action, a draft EIS must first be prepared. The requirements of what a draft EIS must contain are laid out in the SEQRA regulations. Many of these are very similar to the requirements of federal NEPA. Of particular relevance for the consideration of energy efficiency is the requirement that draft EISs include the “impacts of the proposed action on the use and conservation of energy” where “applicable and significant.”<sup>15</sup> Although this language leaves the preparer of the draft EIS some latitude to neglect discussion of energy conservation and efficiency, for a wide variety of projects such considerations will need to be addressed.

The New York State Department of Environmental Conservation (“DEC”) has published guidance on consideration of climate change in EISs when DEC is the lead agency.<sup>16</sup> This guidance provides detailed instructions on how climate change and energy issues should be dealt with in EIS where these issues “have been identified as significant in a positive declaration or, as a result of scoping, are required to be discussed in an EIS.”<sup>17</sup> Under the section on mitigation measures, the guidance provides an extensive list of “examples of measures that can increase energy efficiency, reduce energy demand, and reduce GHG emissions from proposed projects.”<sup>18</sup> Although the guidance notes that “[n]ot all of these measures will be practical or feasible for all proposed projects” and that these measures are intended to be “a menu of possible options,” this list can serve as a good starting point for evaluating the discussion of EE in an EIS prepared pursuant to SEQRA.<sup>19</sup>

#### CEQA

CEQA requires state and local agencies to evaluate the environmental impacts of their actions and to avoid or mitigate these impacts where possible. If an action is expected to have a significant effect on the environment, an Environmental Impact Report (“EIR”), California’s term for an EIS, must be prepared for the project.

The CEQA Guidelines mandate the consideration of energy efficiency in the EIR process. They state that the discussion of mitigation measures in the EIR “shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy...Energy conservation measures...shall be discussed when relevant.”<sup>20</sup> An appendix states, “In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and

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<sup>15</sup> 6 N.Y.C.R.R. §617.9(b)(5)(iii).

<sup>16</sup> New York State Department of Environmental Conservation, *Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement*, (July 15, 2009) available at [http://www.dec.ny.gov/docs/administration\\_pdf/eisghgpolicy.pdf](http://www.dec.ny.gov/docs/administration_pdf/eisghgpolicy.pdf).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> CEQA Guidelines § 15126.4(a)(1).



unnecessary consumption of energy. The appendix also provides detailed information suggesting appropriate topics to be included in a discussion of energy conservation in an EIR.<sup>21</sup>

## **II. Energy Efficiency and Conservation Matters to Discuss in an EIS**

The previous section outlines the regulatory basis for considering energy efficiency and conservation in EISs. This section focuses on the actual issues that often will warrant consideration in a discussion of energy efficiency in an EIS. The discussion below is not meant to be an exhaustive list of all matters that would be appropriate to discuss in this context, but rather an overview of the most common energy efficiency-related issues that arise in the EIS context.

### *a. Amount of Energy that Can be Saved by through Energy Efficiency Measures*

Often, the effect of energy efficiency on the energy balance of the proposed action will be the starting point for a discussion of the impacts of energy efficiency. The reduction in energy usage that can be achieved through energy efficiency measures may have a bearing on the scale of the project, the degree of environmental impacts (e.g. air emissions) and may, in some instances, obviate the need for the proposed action or project altogether. In some cases, it will be important to make sure the actual range of energy savings that can be achieved through energy efficiency measures is quantified rather than qualitatively discussed. A quantifiable amount of energy savings allows for a more impactful argument about what energy efficiency can truly achieve on a project.

### *b. Which Energy Efficiency Measures Should be Considered for the Project?*

It is important that the EIS explicitly describe what energy efficiency and conservation measures, technologies, policies etc. are appropriate for consideration for a given project. Ensuring a detailed discussion of the exact measures by which energy savings can be achieved can help ensure thoughtful consideration of the incorporation of energy efficiency and conservation into the proposed project or action. A detailed discussion will often allow a better accounting and quantification of the potential energy savings than would a general discussion.

### *c. Costs Associated With Undertaking the Proposed Energy Efficiency Measures*

Most of the guidance informing the discussion of energy efficiency and conservation measures in EISs specifically as well as the guidance regarding EIS content generally limit the discussion through “reasonableness” and “relevancy” considerations. While these terms are rarely defined in the relevant guidance, cost certainly is a key factor in whether a proposed mitigation action or alternative is “reasonable.” Thus, it is important for EISs to discuss the costs associated with energy efficiency measures. Such a discussion can serve to prevent the preparer of an EIS from summarily dismissing energy efficiency measures as “unreasonable” due to cost. Many energy efficiency measures are quite cheap to implement and result in significant net economic benefits. Having this explicitly put forth in an EIS can help ensure a full discussion of and consideration of these measures. Furthermore, a calculation

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<sup>21</sup> CEQA Guidelines Appendix F.

of the costs of energy efficiency measures will allow for the consideration of these measures against the proposed action or other mitigation measures and alternatives.

*d. Timeline for Implementing the Proposed Energy Efficiency Measures*

Similar to the rationale for ensuring a discussion of the costs of proposed energy efficiency measures, discussing the timeline on which proposed measures could be implemented helps demonstrate their “reasonableness.” Since energy efficiency measures aimed at targets such as reducing aggregate energy demand over a large geographic area or among a large number of actors can take some time, it is important that the timeline on which the proposed energy efficiency measures could have an impact be thoroughly discussed.

Examples of Energy Efficiency Discussion in EISs

See Appendix A for examples of the discussion of energy efficiency and conservation in EISs.

**III. Procedural Opportunities for Calling for the Consideration of Energy Efficiency in EISs**

The process of drafting, reviewing and finalizing an EIS under NEPA and its state equivalents is a lengthy one that offers multiple opportunities to inject energy efficiency and conservation considerations into the discussion. The process begins with an initial determination about whether NEPA is applicable to the action in question. If the action is subject to NEPA, then it must be determined whether the action or project qualifies for a categorical exclusion under NEPA, thereby negating the need to prepare an Environmental Assessment (“EA”) for the action. Certain actions which based on past experience have been shown to almost never cause significant impacts are listed in the NEPA regulations as qualifying for a categorical exclusion. Finally, if the action or project is subject to NEPA and does not qualify for a categorical exclusion, then an EA will be prepared. Based on this a determination is made whether the action is a “major Federal action[ ] significantly affecting the quality of the human environment.” If this determination is in the affirmative, an EIS is required. This section will outline the various points in the EA and EIS process where interjecting comments and concerns regarding the consideration of energy efficiency is appropriate.

*a. Determination of Significance*

After preparing an EA, an agency may make a “Finding of No Significant Impact.” A FONSI is a determination that the proposed action or project will have a very minimal or no impact on the environment. A FONSI eliminates the need for an EIS, thereby ending the NEPA process.

In most instances, public review of a FONSI is not required and there will be no opportunity for public input. However, CEQ guidelines state that in four instances public review of a FONSI is necessary:

1. The proposal is a borderline case (i.e. there is a reasonable argument for preparation of an EIS);
2. It is an unusual case, a new kind of action, or a precedent setting case such as a first intrusion of even a minor development into a pristine area;

3. There is either scientific or public controversy over the proposal; or
4. It involves a proposal which is or is closely similar to one which normally requires preparation of an EIS.<sup>22</sup>

Additionally, agencies must allow for a period of public review if the proposed action would be located in a floodplain or wetland.<sup>23</sup>

In the above situations, agencies are required to provide a 30-day public review period.<sup>24</sup> However, some agencies are more lenient in providing opportunities for public review of FONSI. For example, the Bureau of Land Management sometimes publishes FONSI and provides a window for public review, even in situations where it is not required.<sup>25</sup> Those considering challenging a FONSI should review the lead agency's policies for commenting on a FONSI.

#### *b. Scoping*

Prior to the preparation of an EIS, agencies must provide "an early and open process for determining the scope of the issues to be addressed and for identifying the significant issues related to a proposed action."<sup>26</sup> Issues may be excluded from consideration at this stage if they are deemed to be "not significant" or if they have been covered by prior environmental review. This stage of the NEPA process offers a prime opportunity to argue for the inclusion of energy efficiency and conservation issues in the EIS. It also offers the best opportunity to provide very detailed comments and shape the overall form and scope of the analysis of the entire discussion of EE in the EIS. It is important to bring up energy efficiency and conservation at this stage of the process because, for issues that are eliminated from detailed consideration in the EIS during the scoping process, the lead agency must provide a brief statement of why the excluded issues will not have significant effect on the environment or a reference for where these environmental issues have been previously addressed. This may provide the grounds for challenging this exclusion later in the process should energy efficiency be excluded from consideration.

#### *c. Review of the Draft EIS*

Any time an EIS is prepared, an agency is required to first prepare a draft EIS which must be made available for review and comment by federal, state and local agencies, Indian tribes and the public. The agency preparing the EIS is required to respond to comments received. Commenting on the draft EIS offers another prime opportunity to raise the issues of energy conservation and energy efficiency in the NEPA process. It also offers the last formal opportunity in the process to raise these issues where there is a requirement of a response. If energy efficiency issues have been entirely excluded from discussion in the draft EIS, this deficiency can be raised at this juncture. If energy

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<sup>22</sup> 40 C.F.R. § 1501.4(e); NEPA Forty Most Asked Questions, *available* at <http://ceq.hss.doe.gov/NEPA/regs/40/30-40.HTM#37>.

<sup>23</sup> Exec. Order No. 11988 (1977); Exec. Order No. 11990 (1977).

<sup>24</sup> 40 C.F.R. § 1501.4(e).

<sup>25</sup> BLM NEPA Handbook H-1790-1, § 8.4.2, p. 84.

<sup>26</sup> 40 C.F.R. §1501.7.

efficiency and conservation issues have been included, any deficiencies, shortcomings or proposed enhancements can also be raised. If a factual issue is not raised as a comment on a draft EIS, it may not be preserved for judicial review, for failure to exhaust administrative remedies.

*d. Final EIS before a Record of Decision (“ROD”)*

After comments have been received on the draft EIS, there may be one additional opportunity to comment on the EIS before it is finalized. CEQ regulations allow, but do not require, agencies to solicit comments on final EISs before a decision on an action is made.<sup>27</sup> Although CEQ’s regulations require a 30-day period before taking final action after notice is published announcing that a final EIS has been filed, the agency is not required to solicit public comments nor is it required to respond to any comments received during this time. Most agencies passively receive any public comments submitted after notice of the final EIS is published. However, some agencies have adopted policies mandating some response to any comments received in this period. For example, the Federal Highway Administration (“FHWA”) has adopted guidance which states that “[a]ll substantive comments received on the final EIS should be identified and given appropriate responses [in the ROD]. Other comments should be summarized and responses provided where appropriate.”<sup>28</sup>

#### **IV. How To Find and Identify Commenting Opportunities**

*a. Federal EISs*

A listing of all EISs prepared by federal agencies, as well as the EPA’s comments concerning the EISs can be located at [www.epa.gov/compliance/nepa/eisdata.html](http://www.epa.gov/compliance/nepa/eisdata.html). The listing of EISs can be sorted by agency, state, date, EISs filed in the last week and EISs with open comment periods. Although the full text of the EISs cannot be obtained through this database as there is no central repository of the full text of all federal EISs, the listings contain enough information to locate the appropriate EIS. In order to locate the text of the EIS in question the lead agency website or the project website, if one exists, are the best places to find the EIS.

*b. State EISs*

The listing, availability and notice procedures surrounding EISs prepared pursuant to state “mini-NEPA” statues will vary by state. Thus, any challenges to EISs brought pursuant to these state laws will require those considering a challenge to examine the state procedures. Both New York and California maintain databases with listings of EISs prepared under each state’s respective mini-NEPA law.

1. New York

The New York Department of Environmental Conservation (“DEC”) publishes the Environmental Notice Bulletin (“ENB”) every Wednesday as required by state law.

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<sup>27</sup> 40 CFR §1503.1(b).

<sup>28</sup> FHWA Technical Advisory T 6640.8A, § VIII.F.

The Bulletin contains notice of EISs prepared under SEQRA. These notices are required to contain the URL where the EIS can be located. The Bulletin can be located at [www.dec.ny.gov/enb/enb.html](http://www.dec.ny.gov/enb/enb.html). Additionally, by sending one's email address to [enb@gw.dec.state.ny.us](mailto:enb@gw.dec.state.ny.us), one can be added to the ENB electronic mailing list through which those on the list will be notified weekly when the ENB becomes available.

## 2. California

The CEQAnet database contains all CEQA documents submitted to the California State Clearinghouse for state agency review since 1990. Because not all environmental documents are submitted to the State Clearinghouse, this is not a comprehensive database. However, it contains a substantial collection of CEQA documents. Like the Federal EPA database, the full text of EISs are not available on the CEQAnet website, however sufficient information is provided to locate the full document. The CEQAnet database can be located at [www.ceqanet.ca.gov](http://www.ceqanet.ca.gov).

### *c. Types of Projects in Which Energy Efficiency Possibly Warrants Consideration in the EIS*

Obviously, energy efficiency considerations will not be appropriate for all projects and actions requiring an EIS. Some projects will have very little energy usage or impact on energy usage. Below is a list of types of projects or actions in which energy efficiency and conservation issues are commonly significant issues that should be considered in the EIS. This list is not exclusive and whether to submit comments on or challenge an EIS based on energy efficiency considerations will always warrant a careful examination of the specific project or action.

1. Energy Generation Projects (including relicensing and permitting) – Energy generation projects such as the construction of a power plant typically require state and/or federal permits, approvals or other governmental action which can trigger NEPA or equivalent state requirements. These projects will almost always offer opportunities for the consideration of energy efficiency as more efficient designs can mitigate some of the environmental impacts stemming from these projects. In instances where a new power facility is proposed to meet projected increased electricity demand in a region, energy efficiency can potentially be a viable alternative means to meet some of this projected increased demand. However, a limitation is that energy efficiency measures may not be within the jurisdiction of the approving agency.
2. Energy Transmission Projects – Energy transmission projects such as electrical transmission wires and pipelines involve significant energy usage issues. For projects of this type energy efficiency may serve as a way to mitigate environmental impacts of the project or as an alternative to the project in its entirety (i.e. as a way

to lessen demand thereby reducing the scale of the project or obviating the need for the project).

3. Energy and Mineral Development Projects (i.e. Mining and Resource Development)  
– Resource development projects such as mining operations and oil and gas development can sometimes involve relatively large amounts of energy. For oil and gas development, large generators (typically diesel fueled) or other sources of energy are needed to power the wells and associated infrastructure, and for unconventional drilling operations such as tar sands development, tremendous amounts of energy are needed to process the resource into usable crude oil. Similarly, for mining operations energy is needed to run mine operations, and if the ore is processed on site this, too, can consume significant amounts of energy. Accordingly, energy conservation measures may be appropriate to consider as mitigation measures for these types of projects.
4. Programmatic EISs – Programmatic EIS involve large, overarching government programs, plans and policies, such as resource management plans, rather than discrete projects and actions. Accordingly, these EISs often will influence a wide array of projects that fall under the ambit of the particular programmatic EIS. These programmatic EISs offer the opportunity to inject energy efficiency considerations into long-term planning and policies through comments on the EIS.
5. Manufacturing Projects – Proposed manufacturing projects could need permits or approvals that would constitute government action warranting the preparation of an EIS. These projects, especially for energy-intensive industries such as cement, chemicals and steel, consume enormous amounts of energy in their operations and thus energy efficiency offers a way for many of these operations to mitigate their adverse environmental impacts.
6. Large Buildings – The construction of large buildings in some instances will require government action and warrant the preparation of an EIS. In such instances, energy efficiency considerations may be appropriate as large buildings consume significant amounts of energy for heating, cooling, lighting and other operations. Energy efficient building technologies offer the opportunity to tremendously reduce energy usage in these buildings.

## **Appendix A**

Example of the Discussion of Energy Efficiency and Conservation in EISs

### **Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 43 Regarding Palo Verde Nuclear Generating Station, Final Report**

**U.S. Nuclear Regulatory Commission, January 2011**

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement43/>

#### **8.4.2 - Impacts of the Conservation Portion of the Combination Alternative**

The combination alternative would include activities aimed at reducing the load that is now being satisfied by the PVNGS reactors. For the purpose of this assessment, “conservation” would include a variety of programs and initiatives generally described as “Demand Side Management” (DSM). DSM programs fall into two broad categories: improving the energy efficiency of facilities and equipment comprising the electrical load supplied by PVNGS reactors, and demand response programs. Energy conservation programs will result in a reduction in the overall quantity of electricity consumed over the year, but may not result in reduction in electricity demand during peak periods.<sup>20</sup> Demand response programs are actions and initiatives aimed at encouraging customers to reduce usage during peak times, or to shift that usage to off-peak times. Unlike energy generation initiatives discussed in this chapter, DSM programs focus on the behavior of the energy end user. DSM can include measures that shift energy consumption to different times of the day to reduce peak loads, measures that can interrupt certain large customers during periods of high demand or measures that interrupt certain appliances during high demand periods, and measures like replacing older, less efficient appliances, lighting, or control systems. While DSM can also include measures that utilities use to boost sales, such as encouraging customers to switch from gas to electricity for water heating, the staff is not evaluating such load-building activities as part of this alternative, as it would result in the need for more energy generation capacity.

In a 2008 staff report, the Federal Energy Regulatory Commission (FERC) outlined the results of the 2008 FERC Demand Response and Advanced Metering Survey (FERC, 2008).

Nationwide, approximately 8% of retail electricity customers are enrolled in some type of demand response program. The potential demand response resource contribution from all US demand response programs is estimated to be close to 41,000 MW, or about 5.8% of US peak demand. A national assessment of Demand Response Potential required of FERC by Section 529 of the Energy Independence and Security Act of 2007 was published by FERC in June 2009 (FERC 2009). The survey evaluated potential energy savings in five- and ten-year horizons for four development scenarios: Business As Usual, Expanded Business As Usual, Achievable Participation, and Full Participation, each representing successively greater demand response program opportunities and successively increasing levels of customer participation.

The greatest savings would be realized under the Full Participation scenario with peak demand reductions of 188 GW by the year 2019, a 20% reduction of the anticipated peak load without any demand response programs in place. Under the Achievable Participation scenario, reflecting a more realizable voluntary customer participation level of 60%, peak demand would be reduced by 138 GW by 2019, a 14% reduction.

In Arizona, the retail electricity customer profile is made up of relatively large percentages of residential customers and small commercial and industrial customers (54% and 26%, respectively). Much of their demand is spent on central air conditioning. Under the Achievable Participation and Full Participation scenarios, residential customer participation could reduce peak loads by 3,082 MW and 4,755 MW, respectively by 2019, whereas small commercial and industrial participation could reduce peak loads by 273 and 606 MW, respectively, by 2019. With all retail electricity customers enrolled in the Full Participation scenario, Arizona has the potential to reduce the projected 2019 statewide peak demand of 22.4 GW by 6,200 MW, or 27.7% of the peak demand.

APS already offers a number of demand response program opportunities to its retail customers, including rebates for installing distributed solar energy systems and high efficiency air conditioning equipment, election of the percentage of power to be generated by renewable energy technologies, voluntary load interruptions during peak times, time-differentiated rates to encourage off-peak energy usage, and a variety of cash incentives, training, and energy information services offered to business customers. Overviews of these programs are available on the APS website: <http://www.aps.com/main/services/default.html>.

In 2008 testimony before the Arizona Corporation Commission, David Pickles, speaking on behalf of APS, outlined the APS demand response programs and provided an estimation of potential expansion (Pickles 2008). The collective impact of all of APS's currently approved DSM Programs through December 2007 has resulted in a peak load reduction of 64.2 MW. Given a reasonable set of assumptions regarding incentive levels and customer acceptance, APS concluded that cost-effective demand response programs could be responsible for peak demand reductions of between 2,600 and 3,900 GWh by 2020. Thus, APS would need to increase the reach of its DSM programs by slightly more than 50% to meet the capacity demands of this hypothetical technology combination alternative to continued operation of the PVNGS reactors.

Although it is impossible to predict with precision which specific DSM programs would be expanded (or started) to meet the 100 MW capacity requirement of this Combination Alternative, it is safe to suggest that conservation programs, by their very nature, represent little to no adverse environmental impacts relative to the conventional electricity generation technology they would replace. The NRC staff concludes, therefore, that the impacts of the conservation portion of the combination alternative will be SMALL for all categories.

Land use impacts of an energy efficiency alternative would be SMALL. Rapid replacement and



disposal of old energy inefficient appliances and other equipment would generate waste material and could potentially increase the size of landfills. However, given time for program development and implementation, the cost of replacements, and the average life of appliances and other equipment, the replacement process would probably be gradual. Older energy inefficient appliances and equipment would likely be replaced by more efficient appliances and equipment as they fail (especially frequently-replaced items, like light bulbs). In addition, many items (like home appliances or industrial equipment) have substantial recycling value and would likely not be disposed of in landfills.

Low-income families could benefit from weatherization and insulation programs. This effect would be greater than the effect for the general population because (according to the Office of Management and Budget [OMB]) low-income households experience home energy burdens more than four times larger than the average household (OMB 2007). Weatherization programs could target low-income residents as a cost-effective energy efficiency option since low-income populations tend to spend a larger proportion of their incomes paying utility bills (OMB 2007). Overall impacts to minority and low-income populations from energy efficiency programs would be nominal, depending on program design and enrollment.

### **8.5.3 - Energy Conservation/Energy Efficiency**

As discussed above in Section 8.3.2, conservation programs and initiatives can play an important role in meeting future energy needs. However, testimony provided to the Arizona Corporation Commission by Pickles suggests that opportunities to further expand conservation programs beyond their current levels would not yield a demand savings equivalent to the baseload power currently represented by PVNGS's nuclear reactors, regardless of how aggressively such conservation programs are pursued (Pickles 2008). As shown in the assessment in Section 8.3 above, however, the NRC nevertheless believes that, when combined with other more conventional baseload technologies, including with certain renewable technologies, conservation programs can help define a technically feasible and practicable alternative to the PVNGS reactors.

## Appendix B

### Sample Draft EIS Comments

**Project/Document:** NRDC Comments on the Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017 Draft Programmatic EIS

**Lead Agency:** Bureau of Ocean Energy Management

**Commenter:** Natural Resources Defense Council

**Date:** 2/8/12

The nation also must ramp up investment and development in renewable energy development and energy efficiency, including offshore sources of energy . . . .

Energy efficiency – in brief, the opportunity to do more with less – is the smartest way to cut energy consumption and jumpstart the transition to a sustainable green economy. Energy efficiency provides the most cost-effective and environmentally sound way of meeting the nation’s energy needs. It can serve as an important bridge to a future of clean renewables. A McKinsey & Company report revealed the significant economic potential generated by adopting a range of energy efficiency measures: investing \$520 billion through 2020 in efficiency programs could save consumers \$1.2 trillion in gross savings during this same time period – roughly the same amount as the 2009 federal deficit. This approach could also cut the overall energy consumption in the United States by 23 percent over the next decade, eliminating the need for significantly greater fossil fuel development. Energy efficiency programs and retrofits could create 600,000 to 900,000 sustainable green jobs during this timeframe.

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In Chapter 2 of the Draft PEIS, the Department states that it considered, but eliminated from further programmatic evaluation, an alternative to develop alternate/renewable energy sources as a substitute for oil and gas leasing on the OCS. The Department attempts to justify eliminating this alternative by stating that alternate/renewable sources “could not replace the energy supplied by oil and gas from OCS sources.” But to be a viable alternative to the Proposed Action, renewable energy and energy efficiency need not replace all of the energy supplied by oil and gas from OCS sources, as the Draft PEIS implies. It would be a viable alternative if it could supply a reasonable amount of energy expected to be gained from the new lease sales in the Proposed Action. In order to meet NEPA requirements, the Draft PEIS must “provide full and fair discussion” of the “reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.”<sup>136</sup> Alternative energy sources and efficiency could be a reasonable alternative that would avoid and minimize significant impacts to the environment, and thus should be considered in the Final PEIS. The Draft PEIS provides a simplistic, erroneous evaluation of these energy alternatives, omitting consideration of entire sectors where innovation can displace the need for more offshore oil and gas development.

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Energy efficiency reduces our energy consumption due in large part to energy efficiency policies and legislation. For example, efficiency programs run by utilities, and government-adopted building codes and appliance standards have been saving energy since the mid-1970s. However, EIA's reference case incorrectly assumes that all these savings will stop in the future, because it assumes no new policies, regulations, and laws. While this assumption might be useful in the context of electricity consumption projections, assuming that efficiency policies will halt tomorrow is incorrect, and has been proven wrong by history.

The Draft PEIS should include a more robust analysis of the impacts to natural gas (and oil) consumption forecasts when future efficiency is included. EIA itself shows that when some efficiency regulations and laws are projected into the future, demand for electricity consumption is significantly reduced, as is demand for natural gas. Including these small estimates of future efficiency policies eliminates most of growth in electricity consumption from natural gas.

This projection itself is conservative because it only includes minimal improvements to energy efficiency. EIA acknowledges that efficiency laws and regulations are typically improved every 6 years, but in projecting out 25 years, only assumes one improvement. Given that EIA's assumptions of future efficiency are conservative, actual efficiency is likely greater, and thus, actual consumption of natural gas from electricity will be lower.

The Draft PEIS conducts an inadequate analysis of future efficiency in the electricity sector. The Draft PEIS analyzes the current roles of natural gas and oil in electricity generation, but finds that efficiency could only displace 6 percent of oil and gas under the No Action Alternative. This estimate is plainly incorrect. Even EIA's conservative assumptions showed that minimal efficiency improvements would displace at least 16 percent of natural gas. Therefore, the Draft PEIS should conduct a thorough assessment of realistic and strong energy efficiency gains in the future that do not underestimate even EIA's conservative estimate.

The Draft PEIS also incorrectly states that natural gas accounts for 40 percent of electricity generation, when it should be 23 percent.

Given the importance of protecting our coastal and ocean resources, the dangers presented to these resources by oil and gas development offshore, and the availability of viable renewable energy alternatives, the Department should, at a minimum, include and analyze an alternative to develop renewable energy and energy efficiency sources in lieu of increased OCS leasing in the Final PEIS.

**[Citations Omitted]**

**Project/Document:** Riverkeeper Comments on Draft Supplemental EIS on U.S. Nuclear Regulatory Commission's Proposed Revisions to NUREG-1437, Generic Environmental Impact Statement for License Renewal. of Nuclear Power Plants

**Lead Agency:** NRC

**Commenter:** Riverkeeper, Inc.

**Date:** 1/21/10

*D. Energy Alternatives Analysis*

NEPA, CEQ and the NRC all mandate a vigorous exploration and an objective evaluation of all reasonable alternatives to license renewals in its regulations. The regulations also require an assessment of alternative energy sources including sustainable energy sources and energy conservation as a means of replacement for IP2 and/or IP3's current power generation.

In the environmental report, the applicants state that power generated by wind, solar, hydropower, geothermal, biomass and other technologies, conservation or a combination of alternatives "were not considered as reasonable replacement base load power generation." Therefore, the applicants did not consider or address a replacement portfolio of power sources inclusive of sustainable sources in coordination with conservation.

The applicants' conclusions simply fly in the face of recent independent technical and scientific studies regarding energy replacement of Indian Point. The most comprehensive study directly on issue is the National Academy of Sciences (NAS) June 2006 report, "Alternatives to the Indian Point Energy Center for Meeting New York's Electrical Power Needs." The report ultimately concludes that even when considering the combined energy production of IP2 and IP2, the approximately 2000 MWe is replaceable, and "the committee has identified no technical obstacles that it believes present insurmountable barriers to the replacement of Indian Point's capacity, energy and ancillary services." \*\*\*

Furthermore, contrary to Entergy's findings, the NAS study states that an achievable replacement strategy would focus on conservation, energy efficiency, improvement of transmission infrastructure and replacement generating capacity including wind, photovoltaic, hydroelectric and other technologies such as natural gas-fired combined cycle plants. The study states that "a replacement strategy for Indian Point would most likely consist of a portfolio of the approaches discussed in this report, including investment in energy efficiency, transmission and new generation" and that regarding wind generation alone: "technically there is sufficient wind resource in New York state to replace the Indian Point units."

Additionally, the Nuclear Research Institute and the Institute for Energy and Environmental Research recently published a summary of its book to be published in October of 2007; "Carbon Free and Nuclear Free - A Roadmap for U.S. Energy Policy." The overarching finding of the study is that a reliable U.S. electricity sector is achievable without nuclear power through a combination of conservation and alternative sustainable energy sources and thus would reduce environmental risks posed by nuclear proliferation, terrorism, severe accidents nuclear waste and uranium mining and transportation.

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Entergy has grounded its refusal to even consider a reasonable replacement generation scenario

to include a portfolio of sources including renewable sources on NUREG- 1437 Vol. 1 Section 8.1. However section 8.1 is neither a regulation nor a statute, but merely guidance. It states, in part, that the "NRC has determined that a reasonable set of alternatives should be limited to analysis of single, discrete electrical generating sources." Section 8.1 does not comply with NEPA's mandate to assess all reasonable "alternatives to the proposed action[.]" \*\*\*

The above-referenced studies demonstrate the necessity and feasibility of developing and implementing energy portfolios that include renewable energy sources, conservation and energy efficiency measures. The NRC's continued reliance on an outdated GEIS that ignores the significant progress made on energy issues is unreasonable, because it ignores the NEPA mandate to fully, consider "new and significant" information in the SEIS.

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The NRC Staff's combination alternatives also largely ignores the benefits of energy conservation and efficiency. The NRC Staff has failed to consider New York State's lofty plans and steps taken for reducing the state's electricity usage and increasing energy efficiency. Recent information demonstrates the increasing financial, technical, and political viability of energy conservation.<sup>329</sup> However, by incorrectly assuming that energy conservation would only result in a savings of 800 MW, the NRC Staff arbitrarily fails to consider energy conservation as a full replacement for one or both of the units.

Based on the foregoing, the NRC Staff's consideration of renewable energy sources and energy conservation and efficiency is severely wanting. Since the DSEIS does not adequately analyze the availability and environmental impacts of alternatives, the NRC Staff's assessment of the no action alternative in section 8.2 of the DSEIS is flawed. Indeed, the no-action alternative assessment does not consider and analyze much new information about various measures that would be taken if the no-action alternative were chosen, compared to the detriments that would be caused by relicensing of IP2 and 1P3. In contrast, the State of New York, with expert support, has laid out examples of combination alternatives using more realistic estimations, which demonstrate that the no-action alternative, i.e., not relicensing IP2 or IP3, is preferable. Such combinations would use mostly renewable energy sources coupled with energy efficiency measures and are readily achievable under existing and identified New York State programs.